

Notice of Allowability

Application No.

09/722,367

Examiner

Kimbinh T. Nguyen

Applicant(s)

DREBIN ET AL.

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed 02/01/05.
2. ☒ The allowed claim(s) is/are 1-3,5-16 and 18-49.
3. ☒ The drawings filed on 28 November 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 02/01/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 02/01/05 has been entered.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 02/01/05 was filed after the mailing date of the Notice of Allowance on 05/04/04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

Claims 1, 26, 43, the prior art does not teach a recirculating texture unit including a texture coordinate processor, a texture mapper and a texture data feedback path that recirculates selected texture mapped from the texture mapper back to the coordinate processor; a hardware shader that blends selected inputs to provide a calculated color or opacity output that is feedback for use as an input to the shader; wherein the texture

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coordinate processor interleaves the processing of direct and indirect texture coordinates.

Claims 14, 18, 39, the prior art does not teach a multi-texturing method comprising: passing texture mapping data through a component combining arrangement to provide combined textures component outputs; passing the combined textured component outputs through the reconfigured but same component combining arrangement providing both color and alpha blend operations; wherein the texture coordinate processor interleaves the processing of direct and indirect texture coordinates.

Claim 21, the prior art does not teach a texture coordinate address unit and a texture environment unit including combiner circuits, an improvement comprising iteratively reusing the combiner circuits to provide multiple stages, wherein the multiple stages provide both color blend and alpha blend operations, wherein the texture coordinate processor interleaves the processing of direct and indirect texture coordinates.

Claim 25 comprises the same claimed elements as claim 21. In addition, the prior art does not teach computing the combiner circuits by using the claimed equation.

Claims 28, 33, the prior art does not teach a recirculating texture unit including a texture coordinate processor, a texture mapper and a texture data feedback path that recirculates selected texture mapped from the texture mapper back to the coordinate processor a texture environment unit including combiner circuits, an improvement unit configured within the pipeline to process input texture, color and alpha data to provide

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blending, texture, color and alpha, the texture environment including having a feedback mechanism, wherein the texture environment provide both color blend and alpha blend operations in a same blending operation, wherein the texture coordinate processor interleaves the processing of direct and indirect texture coordinates.

Claim 44, the prior art does not teach a multi-texturing processing subsystem provides samples of multiple textures to hardware shader that performs blending/shading, wherein the hardware shader recirculates a resulting output for performing subsequent blending to provide both color and blend operations, the texture coordinate processor interleaves the processing of direct and indirect texture coordinates.

Claims 45-49, the prior art does not teach a recirculating texturing pipeline arrangement having a single texture address coordinate, a single texture retrieval unit, a texture lookup data feedback path; a recirculating shade-tree alpha/color blender arrangement having a hardware shader connected to receive an output and a feedback path from an output of the hardware shader to an input of the shader for recirculating to provide an output is fed back for use as an input to the shader, wherein the blender arrangement provides both color blend and alpha blend operations, wherein the interleaves the processing of direct and indirect texture coordinates.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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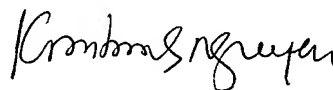
accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimbinh T. Nguyen whose telephone number is (571) 272-7644. The examiner can normally be reached on Monday to Thursday from 7:00 AM to 4:30 PM. The examiner can also be reached on alternate Friday from 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached at (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 23, 2005



KIMBINH T. NGUYEN
PRIMARY EXAMINER